Before the
Maryland Occupational Safety & Health Advisory Board

IN RE:	Draft Prohibition on Smoking in the Workplace	§ § § §	COMAR No. 09.12.23

Overview

Dated:
December 1, 1993

Respectfully Submitted By:
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OVERVIEW

I. INTRODUCTION

On December 9 and December 16, 1993, the Maryland Occupational Safety and Health (MOSH) Advisory Board will hold hearings on an initial draft of a proposed regulation that, if enacted, would ban employee smoking in all workplaces. The proposed regulatory language provides that "[a]n employer shall ensure that an employee, while in the place of employment, does not smoke." The term "smoke" is defined to mean "use or carry any lighted pipe, cigar, cigarette, or other tobacco product in any form." Philip Morris is opposed to this ban. It is Philip Morris' position that such a ban is not authorized by law, is not adequately supported by science, and is unduly burdensome on both employers and employees. This Overview statement is intended to provide the Advisory Board with a non-technical summary of (1) the legal prerequisites to promulgating such a regulation, (2) the lack of scientific data supporting a ban on smoking in the workplace, and (3) the adverse effects on employers and employees resulting from a workplace ban on smoking. We have also submitted additional documents which provide more detail and support for statements that we make in this Overview.

Philip Morris respectfully requests that the Advisory Board reconsider this proposed regulation.

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II. LEGAL PREREQUISITES TO REGULATION

A. Absence of Significant Risk

The MOSH Act provisions regarding the adoption of safety and health standards that regulate "toxic materials or harmful physical agents" are modeled, almost verbatim, on the federal Occupational Safety and Health (OSH) Act. A side-by-side comparison of the MOSH Act and federal OSH Act provisions regarding promulgation of occupational safety and health standards reveals how closely the MOSH Act mirrors the federal OSH Act in this regard:

MOSH Act	Federal OSH Act
The Board shall ". . . recommend occupational safety and health standards that most adequately ensure, to the extent feasible on the basis of the best available evidence, that no employee, including an employee who has regular exposure to toxic materials or harmful physical agents during the working life of the employee will suffer material impairment of health or functional capacity."	The Secretary of Labor shall ". . . set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life."
§ 5-309(c)(1)	29 U.S.C. § 655(b)(5)

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Similarly, both the federal OSH Act [29 U.S.C. § 652(8)] and the MOSH Act [§ 5-101(e)] define "occupational safety and health standard" as a regulation that requires a condition, or the adoption or use of practices, means, methods, operations or processes, that are reasonably necessary or appropriate to provide safe and healthful employment and places of employment.[1/]

While there is no case authority under Maryland law interpreting the threshold requirements that must be met under the MOSH Act before regulation of workplace exposures can occur, the corresponding federal OSH Act language has been extensively interpreted by the federal courts, including the United States Supreme Court. When this situation has occurred with other Maryland laws, Maryland courts have consistently followed the federal courts' interpretations. The leading federal case on the promulgation of occupational safety and health standards is Industrial Union Department, AFL-CIO v. American Petroleum Institute, 448 U.S. 607 (1980) (Benzene). In that case, the United States Supreme Court struck down OSHA's attempt to reduce the permissible exposure limit (PEL) for benzene from 10 ppm to 1 ppm, as well as the Agency's ban on dermal contact with benzene. OSHA's regulatory policy at the time of the Benzene decision was that whenever the toxic material to be regulated was a carcinogen, there was a presumption that there was no safe level of exposure. 448 U.S. 624 N.19. OSHA admitted, however, that it lacked the scientific data necessary to demonstrate the relationship between a particular exposure level and the risk of cancer associated with that

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[1/] The MOSH Act uses the phrase "reasonably appropriate or necessary" while the federal OSH Act uses the phrase "reasonably necessary or appropriate."

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level of exposure. 448 U.S. 631-632. In rejecting this regulatory policy, the Court held that OSHA had failed to demonstrate with substantial evidence that benzene exposure at or below the former PEL of 10 ppm (and above the new 1 ppm PEL) posed a significant risk of material health impairment. 448 U.S. at 631-634.

The importance of the Benzene decision in the present consideration of a ban on smoking in the workplace is that the Supreme Court held that before issuing a standard to regulate a toxic material or harmful physical agent, the Secretary of Labor must establish that the exposure to such a toxic material or harmful physical agent makes the workplace unsafe for employees. The Court very clearly explained that requiring that a workplace be safe is not the same as requiring that it be risk-free. 448 U.S. at 650. A workplace is considered to be unsafe only if the workplace exposures threaten employees with a significant risk of harm. Therefore, before promulgating any occupational safety and health standard, the language of the statute requires a threshold finding that the place of employment is unsafe in the sense that the toxic substance in question poses a "significant risk of material health impairment." 448 U.S. at 642.

In addition to establishing the existence of a significant risk, the Secretary must also demonstrate that the proposed standard is "reasonably necessary or appropriate" to reduce the risk.[2/] This step in the analysis necessarily requires some assessment or determination of the level at which the significant risk of harm is eliminated or substantially reduced. 448 U.S. 662. In the Benzene decision, the Supreme Court struck

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[2/] OSHA must also show that the standard is economically or technologically feasible. Obviously, if a standard is not feasible, it is not "reasonably necessary or appropriate."

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down OSHA's ban on dermal contact with benzene, because OSHA did not show the ban to be "reasonably necessary and appropriate" to remove a significant risk of harm from dermal contact with any level of benzene, no matter how minute the exposure. In sum, the Supreme Court held that a ban on dermal contact could not be justified because there was no showing of the level of exposure at which a significant risk of harm existed, nor that a ban was "reasonably necessary and appropriate" to remove that risk.

Applying the Supreme Court's requirements in the Benzene case to the present consideration of a workplace smoking ban, MOSH must first establish by substantial evidence that workplace exposure to environmental or passive tobacco smoke (PTS)[3] poses a "significant risk of material health impairment." Little reliable scientific data exists on workplace exposure to PTS. More importantly, the data that does exist, fails to support a finding of significant risk. Of the 35 published epidemiologic studies on spousal smoking and lung cancer, 14 assessed reported workplace exposures to PTS. Of these 14 workplace studies, 12 reported associations between PTS and nonsmoker lung cancer which did not achieve statistical significance.[4] (See pages 1-2 of Section B of our

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[3] We are using the acronym "PTS" in this document because federal OSHA used this term in its Request for Information concerning "Occupational Exposure to Indoor Air Pollutants", 56 Fed. Reg. 47892 et seq. (1991). OSHA used the phrase "passive tobacco smoke" so as not to confuse this topic with OSHA's procedure for an "emergency temporary standard" or "ETS."

[4] When a hypothesis (in this case, that there is an association between nonsmoker exposure to PTS in the workplace and lung cancer) is tested, the result is statistically significant if the probability that it occurred by chance is low. The level of statistical significance commonly accepted is expressed in terms of a .05 probability or significance level. "Significant with .05 probability means there is only a 5 percent probability that the results were attributable to chance and a 95 percent probability that the results were attributable to the experiment." Risk Analysis: A Guide to Principles and Methods for Analyzing Health and Environmental Risks, Cohrssen and Covello, U.S. Department of Commerce, National Technical Information Service, 1989, p. 373.

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"Summary Analysis on Environmental Tobacco Smoke: The Scientific Issues of Exposure and Health," included in this volume under Tab 3). Likewise, of the five published epidemiologic studies addressing workplace exposure to PTS and heart disease, none reported a statistically significant increased risk of heart disease among nonsmokers claiming exposure to PTS at work. (See page 3 of Section C of our "Summary Analysis on Environmental Tobacco Smoke: The Scientific Issues of Exposure and Health," included in this volume under Tab 3).

The lack of reliable workplace exposure data is further demonstrated by federal OSHA's response to a lawsuit filed in United States Court of Appeals for the District of Columbia by Action on Smoking and Health (ASH) to force OSHA to issue an emergency temporary standard banning smoking in the workplace. The Secretary of Labor, on behalf of OSHA, conceded that "the data concerning occupational exposure to ambient tobacco smoke was inadequate to permit OSHA to quantify the risk existing under prevailing occupational exposure conditions. There is simply no agreement among scientists as to the likely exposure levels and the degree of risk in workplaces, as distinguished from non-occupational settings." ASH v. OSHA, No. 89-1656 (Brief for the Secretary of Labor, April 5, 1991).

The United States Environmental Protection Agency's (EPA) recent risk assessment on PTS will be repeatedly referenced by individuals and groups supporting a workplace smoking ban. The EPA Report, titled "Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders," focuses primarily on exposure to high levels of passive smoke from spousal smoking in the home. Only 11 of the 30 spousal smoking studies analyzed in the EPA Report even include estimates of workplace PTS exposures in addition to exposure in the home environment, and these estimates provide only very little

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exposure data. Ten of those 11 studies reported no statistically significant increased risk for the non-smoking spouse. And, if the workplace exposure data from all 11 studies were pooled in what is referred to as a meta-analysis, the risk assessment would indicate no positive association between workplace exposure to PTS and lung cancer in nonsmokers.

Moreover, of the 11 United States spousal smoking studies that EPA relies on to estimate the relative risk associated with PTS, none originally achieved statistical significance overall. Only after EPA subsequently lowered the original statistical significance standards used by the authors of the studies was EPA able to reach its conclusion.[5] Furthermore, EPA failed to include in its PTS risk assessment one of the largest and most recent studies on PTS, funded in part by the National Cancer Institute, which reported no overall statistically significant increase in risk between spousal smoking and lung cancer. Had these study data been included in the EPA's risk assessment and analyzed using accepted statistical standards, the overall lung cancer risk estimate from reported PTS exposure would again not have been statistically significant. When the data are properly considered, the EPA's risk assessment does not provide support for a significant risk evaluation in Maryland.[6]

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[5] The authors of these studies used a 95% probability test, which is the standard used by most scientists. The EPA, however, lowered the confidence interval to 90%. If an experiment or test were conducted 100 times, a "95% confidence interval" is a statistical expression of the range of values in which the experiment or test results would fall 95 times out of 100. By lowering the confidence interval, the EPA has increased the likelihood that the results are incorrect.

[6] It should also be noted that the EPA's risk assessment has been challenged in court and that litigation is still pending. Flue-Cured Tobacco Cooperative Stabilization Corporation, et al. v. United States Environmental Protection Agency, et al. Case No. 6:93CV 370 (M.D.N.C. 1993).

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Even if MOSH could establish that any amount of PTS, no matter how minute, poses a risk of material health impairment, the Agency must also demonstrate that the quantity of the risk posed is significant. Although the courts have held that this quantitative risk assessment need not be made with scientific certainty, the Agency must provide at least an estimate of the actual risk associated with exposure to a particular toxic substance and explain why that risk is significant. In its rulemaking processes, federal OSHA has satisfied this requirement by estimating the number of workers likely to suffer the effects of exposure. In the Benzene case, the Supreme Court offered as an example of significant risk, a scenario in which one employee in 1,000 who were exposed to the toxic substance would suffer the expected consequences. Following the Supreme Court's quantification of significant risk, OSHA adopted as its policy that it will only regulate levels of toxic materials or harmful physical agents that pose a risk of at least one excess death per 1,000 employees. Following this policy, to regulate PTS, MOSH would have to demonstrate that current levels of exposure to PTS in the workplace present a risk of at least one excess death per 1,000 employees. The scientific data, when fairly and objectively evaluated, do not support such a finding.

B. MOSH Must Satisfy The "Products Clause"

Assuming for the purposes of argument that MOSH could establish a significant risk of material impairment of health, Section 5-309 of the MOSH Act, which parallels Section 18(c)(2) of the federal OSH Act, states that any standards proposed must be required by "local conditions" and must not put an undue burden on interstate commerce. MOSH cannot establish either condition of this so-called products clause. Since

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the alleged health effects of PTS are no different in Maryland than in any other state, MOSH cannot show that "local conditions" in Maryland justify a workplace ban just for that state. Workplace exposure to PTS is clearly national in scope and therefore within the province of federal OSHA, which in fact has already initiated the rulemaking process on the regulation of indoor air quality. 56 Fed. Reg. 47892 et seq. [Docket No. H-122] (1991). Individual state standards, which will inevitably conflict, will certainly unduly burden interstate commerce of tobacco products.

III. INDOOR AIR QUALITY

Concern about indoor air quality and such issues as "sick building syndrome" has been voiced in both private and public employment environments over the last several years. The current smoking ban under consideration in Maryland may, in part, be in response to this concern. While a workplace smoking ban may be viewed by some as an easy solution to inadequate indoor air quality, existing research reveals that PTS has a very minimal effect on the quality of indoor air. Some of the most compelling evidence in this regard comes from the U.S. Department of Labor's National Institute for Occupational Safety and Health (NIOSH). In its summary of the Health Hazard Evaluations that it performs in workplace buildings, NIOSH reports that out of approximately 500 evaluations, 52% of its investigations result in findings that inadequate ventilation is the source of most indoor air quality problems. In a detailed study of 203 of those investigations conducted in 1984, NIOSH reported that tobacco smoke was a contributing factor in only four or 2% of the buildings investigated. In a 1989 follow-up report of over 500 building

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investigations, NIOSH elected not to even designate PTS as a separate category of contributing factors.

In those situations where indoor air quality is regulated, non-smoker exposure to PTS may be significantly reduced in a cost effective manner by adopting ventilation rates such as those specified in the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 62-1989, "Ventilation for Acceptable Indoor Air Quality." ASHRAE Standard 62-1989 establishes minimum ventilation rates for various indoor settings in order to "control carbon dioxide and other contaminants with an adequate margin of safety, and to account for variations among people, varied activity levels, and a moderate amount of smoking." This Standard was approved in 1990 by the American National Standards Institute (ANSI). ASHRAE 62-1989 has been adopted by 12 states and by two major building code organizations in the United States, and is currently under consideration for adoption by the remaining national building code organizations. The Standard recommends a ventilation rate of 20 cubic feet of outside air per minute (cfm) per person for most commercial or office facilities, with 15 cfm as the minimum. The drafters of the Standard concluded that a minimum ventilation rate of 15 cfm/occupant will produce air quality that is acceptable to 70% of visitors and to 90% of occupants, assuming a moderate amount of smoking (30% smoking, 1.7 cigarettes/hour/smoker).

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IV. PRACTICAL EFFECTS OF THE PROPOSED BAN

The proposed workplace smoking ban has other, perhaps unanticipated, implications for both employers and employees in the state. This ban penalizes employees in workplaces where satisfactory measures have been established that accommodate the interests and concerns of both smokers and non-smokers alike. For companies that have created designated internal smoking areas, have permitted smoking in specified outdoor areas, have committed to maintaining adequate ventilation, or whose employees follow a rule of mutual consideration and accommodation regarding smoking, Maryland's proposed ban undercuts these reasonable workplace solutions. At the same time that the proposed ban is adversely affecting the employees in these environments, it is, in effect, turning the employers and MOSH into the "smoking police." The enforcement problems that would accompany a ban of this nature would be further compounded by work sites over which the employer has little control (e.g. taxicabs, trucks, company cars) and by work sites that, by their nature, have more than adequate outside air (e.g. agriculture, construction). For all of these situations, the Maryland proposed ban takes an issue that is currently being satisfactorily addressed in most workplaces through voluntary solutions agreed upon by management, employees and labor representatives and unnecessarily turns it into an issue that infringes upon employee rights and subverts existing workplace accommodations. It would also force the redirection of scarce occupational safety and health enforcement resources.

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V. CONCLUSION

It is the position of Philip Morris that the available scientific data do not support a finding of "significant risk." In the absence of a showing of "significant risk," regulation of PTS and, more specifically, a regulatory ban on PTS, is not legally justifiable. In addition to the legal prerequisites that should be considered by the Advisory Board, Philip Morris also urges the Board to closely consider the practical implications of the proposed ban and the effect it would have on the vast majority of employers who have or are in the process of voluntarily addressing workplace smoking. Finally, if it is determined that a need exists for regulatory action, the Advisory Board should consider the adoption of ventilation rates at least equivalent to those set forth in a general consensus standard like ASHRAE 62-1989. Such a regulation would effectively improve indoor air quality generally and, at the same time, address PTS in the workplace.

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